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On Storage

Storage is a very old human necessity. When man started to plant grain he had to store it for winter and invented the silo. When man started to tell stories, even before he learned to write and read, he had to find a way to save these traditions and he invented the talking book, people who would memorize and could recite certain "texts." In North Africa, talking books would recite the law during trials.

The principal requirements for storage are that the information (or object) should be available, accurate and cheap.

In the beginning, computers were programmable calculators and the only data they needed were the inputs for the calculation. Punched cards and punched paper tape did this quite well.

As computers were put to work solving administrative tasks, additional information, not part of any calculation, was also stored, for example, the name, age, gender and other data of an employee, which are not needed to calculate his taxes, deductions and other calculated figures. Computers borrowed magnetic tape from the music industry and later a modified version of disks (circular tracks instead of helicoidal tracks for random access).

As more things were digitized (music, pictures, TV) the computer was found to be useful for managing them but there is really no reason to store the data itself on a computer peripheral. All the computer needs is certain information about the data to do its work. Just like it does not need to store the employee on a peripheral to calculate his deductions—certain data about the employee suffice for this!

Before networks, there was no way to use the computer to manage digital objects (non-data like music and pictures) without storing these objects in computer peripherals. With the advent of the optical net, these objects can be stored anywhere and don't even need to be digital, sound and video, for example, could be stored in analog form if this was found to be more useful than its digital equivalent and manageable by the optical net. Is the Foveon camera digital or analog?

In the NAS paradigm, objects will be stored in digital or analog formats, wherever it is most convenient to place them. Some of them will be cloned and kept in a variety of places. Computer databases will keep track of these objects but will no longer be burdened by storing and handling the objects themselves. If this vision is true, then disk drives will not be the only NAS storage devices. Maybe it will be possible to hook up your old fashioned (refurbished) jukebox.

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